Unhallucinating Hackathon

Problem statement

Creating an advanced Finance RAG-based app with reduced hallucinations using Vectara's HHEM (Hallucination Handling and Error Mitigation) model

Team Members

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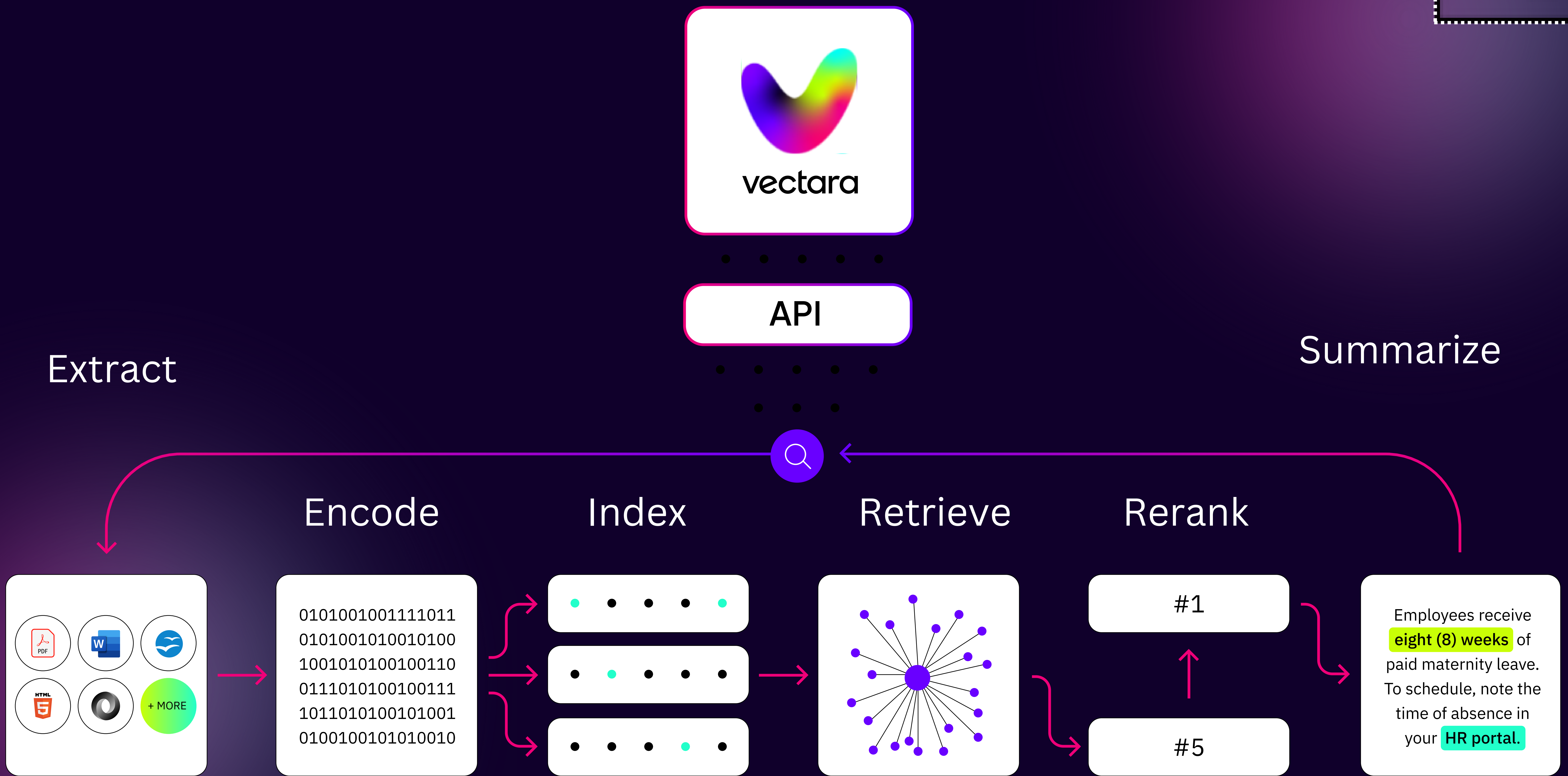
Vectara Architecture



Our Vision

In finance, thorough fact-checking is essential for informed decision-making. Here's why:

Accuracy

Financial decisions are based on numbers and data, so it's crucial that the information used is accurate. Incorrect data can lead to flawed analysis and misguided decisions.

Strategic Planning

Fact-checking supports strategic planning by providing a reliable foundation for forecasting and setting goals. Without accurate information, strategic decisions may be based on faulty assumptions.

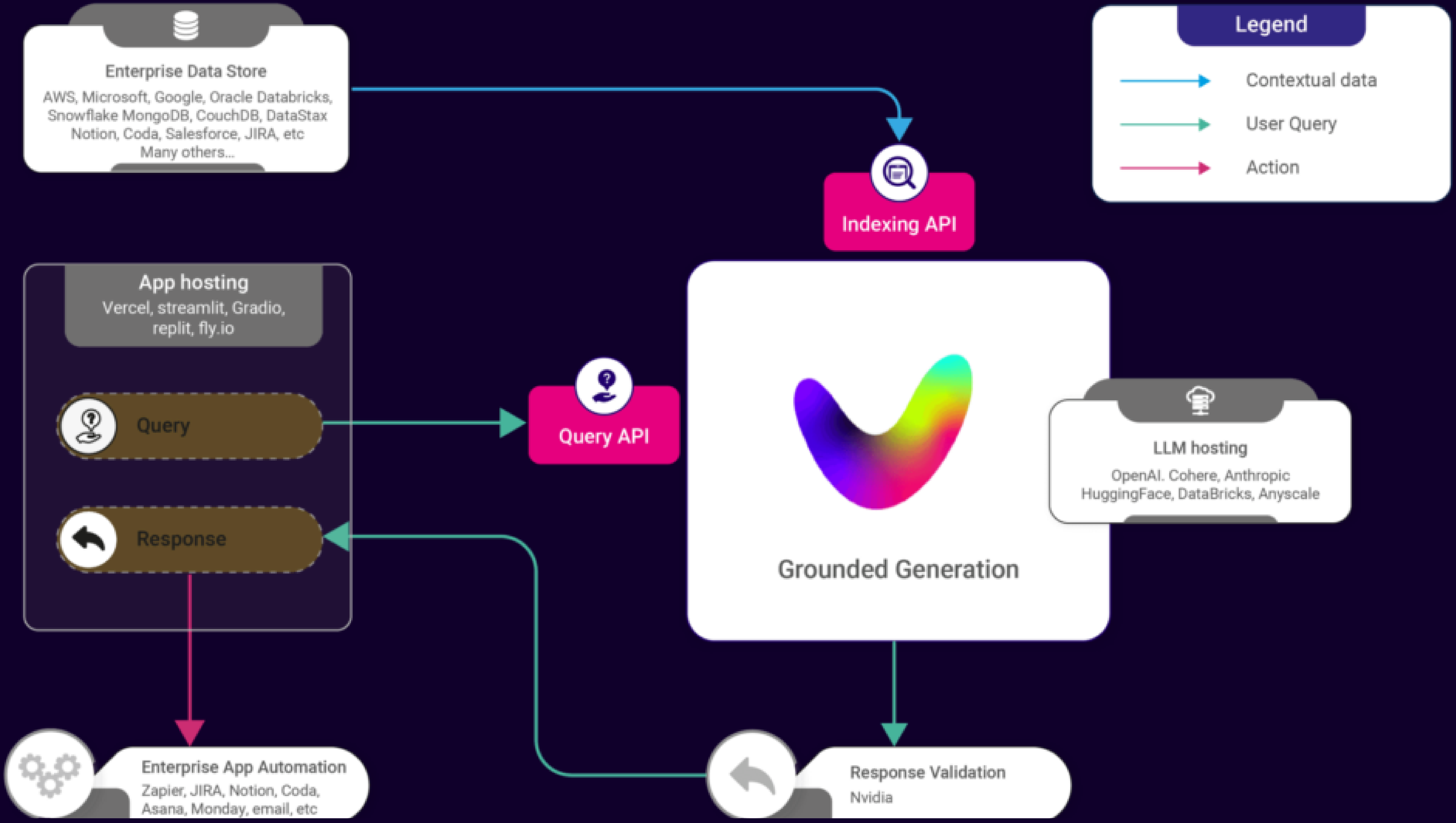
Reputation

Inaccurate financial information can damage the reputation of individuals or companies. Stakeholders, such as investors, lenders, and customers, rely on accurate financial reporting to make their own decisions.

thorough fact-checking is a fundamental aspect of financial decision-making. It ensures accuracy, reduces risk, facilitates compliance, protects reputation, supports strategic planning, and optimizes resource allocation.

Conclusion

Use of Approach of HHEM RAG Model



Our Approach

1 Data Collection & Preprocessing

Ingesting relevant data of finance in our RAG system

2 Feature Engineering

Extract relevant features from our data that will help the HHEM model identify and mitigate hallucinations effectively

3 Training the HHEM Model

Train the HHEM model using our preprocessed data. Ensure you have a robust validation process in place to evaluate the model's performance and adjust hyperparameters as needed.

4 Integrating with RAG System

incorporate the trained HHEM model into your RAG system. This might involve modifying our existing algorithms to incorporate the outputs of the HHEM model into the final RAG assessments.

5 Testing and Validation

Thoroughly tested our app to ensure it's functioning correctly and effectively reducing hallucinations in the RAG assessments. Validate the performance of the HHEM model across different scenarios and datasets to ensure its robustness.

Our RAG-Based App Response using Chainlit

User
09:39:01 pm

what are the factors monitoring risk management

Assistant
09:39:10 pm

The factors monitoring risk management include understanding the global financial markets and potential spillover effects [1]. Banks need adequate policies and procedures for identifying, measuring, monitoring, and controlling country risk and transfer risk [1]. Internal risk ratings are crucial in monitoring and controlling credit risk, with responsive systems that identify changes in risk profiles [2]. Supervisors should have regulations limiting concentrations and banks must monitor industry concentrations [3]. Financial risk factors related to liquidity, solvency, profitability, and repayment capacity are assessed using data from balance sheets, income statements, and cash flow information [4]. Credit administration areas should ensure the efficiency of operations, accuracy of information, segregation of duties, and compliance with policies and regulations [5].
Sources: Source 1, Source 2, Source 3, Source 4, Source 5
HHEM Scores: [0.7639921, 0.24890868, 0.3627936, 0.50552934, 0.36319986]

User
09:39:24 pm

what is operational risk management

Assistant
09:39:30 pm

Operational risk management is a well-established discipline in the banking industry [1]. It involves identifying, assessing, and mitigating risks arising from operational failures, such as processing errors, fraud, legal claims, and business disruptions [1]. Financial institutions have recognized these risks since the inception of banking [1]. Various methods and levels of sophistication are employed to manage operational risks, ranging from qualitative approaches to complex statistical modeling [3]. The Advanced Measurement Approach (AMA) is a quantification approach used by supervised institutions in the United States [4]. The Federal Financial Institutions Examination

Chat Readme

To exit full screen, move mouse to top of screen or press F11

New Chat

Assistant 09:39:10 pm

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Sources: Source 1, Source 2, Source 3, Source 4, Source 5
HHEM Scores: [0.8283711, 0.60256773, 0.4452153, 0.3116165, 0.5316978]

Type your message here...

Built with Chainlit

Source 1

Operational Risk Management: An Evolving Discipline Operational Risk Management: An Evolving Discipline Operational risk is not a new concept in
the banking industry. Risks associated with operational failures stemming from events such as processing errors, internal and external fraud, legal claims, and business disruptions have existed at financial institutions since the inception of banking.

Thank You
For Watching